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ABSTRACT

Using data obtained in December 1979 from the biennial Hired Farm Working Force Survey supplement of the Current Population Survey, case weights were applied to obtain a sample of 149 migrant farmworker case studies (selected from an estimated 217,000 migrant farmworkers) to ascertain the agricultural attachment level of migrant farmworkers in terms of employment and demographic variables. Analyses focused on three worker groups: those citing farmwork as their principal activity during the year; workers citing nonfarm work as their principal activity; and those not in the labor force during most of the year. Variables examined included age, sex ethnicity, education, days worked, wages earned, distance traveled, and major crop or livestock activity. Analyses indicated that: the primarily farmwork group was highly dependent on agriculture for the majority of their earnings, had lower total earnings than those of the primarily nonfarm work group, and were more likely to be older, household heads, and largely responsible for their families' support; and the primarily nonfarm work group used farmwork only for supplemental income, obtained only a small portion of their total earnings from farmwork, and had higher total earnings than others. Data suggested possible inaccuracies in the general image of migrant farmworkers as portrayed by the literature. Statistical tables are appended. (AH)

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INTRODUCTION

Despite the long-term interest in the social and economic conditions of migrant farmworkers (McWilliams, 1939; President's Commission on Migratory Labor, 1951; Bishop, 1967; Sosnick, 1978; Whitener Smith and Coltrane, 1981), there continues to be a paucity of information on this segment of the Nation's hired farm work force. This paper helps to fill this information gap by examining the agricultural attachment of migrant farmworkers in terms of employment and demographic variables. The analysis focuses on three groups of workers: (1) those citing hired farmwork as their principal activity during the year; (2) workers citing nonfarm work as their principal activity; and (3) those not in the labor force most of the year. The major variables examined include age, sex, ethnicity, education, days worked, wages earned, distance traveled, and major crop or livestock activity.

The lack of detailed information has led to considerable speculation and generalization about migrant farmworkers. Popular image depicts migrants as a large, homogeneous, low-income group of workers who travel up and down the "migrant streams" harvesting the Nation's fruits and vegetables (Chaze, 1982). Their low incomes are generally attributed to their stong attachment to low-wage agricultural work and their economic problems are complicated by increased travel costs, job insecurity, and frequently poor living conditions while in transit. Migrants are generally described as "the most disadvantaged group of agricultural workers in the United States (Marshall, 1974).

Despite this image, the employment experiences of migrant farmworkers do not appear to be consistent. Some migrant farmworkers, for example, hold a series of migrant farm jobs during the year enabling them to piece together a semblance of year-round employment. Others are engaged primarily in nonfarm occupations but do some migrant farmwork during the year. Still others are students, housewives, and other persons not in the labor force most of the year who do migrant farmwork for a few days or a month during the spring and summer months.

This paper examines categories of agricultural attachment to determine whether there are clearly definable groups of migrants which differ significantly in terms of their demographic and employment characteristics. The existence of these groups would successfully challenge the general stereotypic image of migrant farmworkers and would expand current knowledge on the nature of the migratory farm labor market.

DATA AND RESEARCH METHODS

The data for this study were obtained in December of 1979 from the biennial Hired Farm Working Force Survey conducted for the Economic Research Service, U.S. Department of Agriculture by the Bureau of the Census as a supplementary part of the Current Population Survey (U.S. Bureau of Census, 1963; Pollack, 1981). Data were collected from approximately 68,200 households with about 2,000 containing at least one hired farmworker. The sample includes areas in every State and the District of Columbia but excludes Puerto Rico and other U.S. territories and possessions.

The Current Population Survey is a stratified multi-stage area probability sample. Case weights (expansion factors) are applied to sample results to derive independent estimates of the U.S. civilian noninstitutional population

by age, race, and sex. This resulted in an estimated 217,000 migrant farmworkers in 1979. However, statistical significance is relatively easy to achieve with a large number of cases because of an artificial reduction in variance and standard error estimates. Thus, it is almost always possible to reject the null hypothesis of no difference, even for a very slight relationship (Blalock, 1972). To avoid this problem, the case weights were adjusted so that the number of cases was reduced to the original sample size of 155 and the compositions of both the expanded data and the adjusted data were identical. With the exception of data presented in table 1, all anaysis in this paper is based on the adjusted data.

Attachment to farmwork is measured in terms of a farmworker's response to a question concerning his/her primary employment status during the year.

> "What were you doing most of 1979, working, keeping house, going to school, or something else?"

Response categories and percentage distributions are shown in table 1. For purposes of this study, only three categories were used: (1) those citing hired farmwork as their primary employment activity; (2) those citing nonfarm work as their primary activity, and (3) those citing not in the labor force most of the year. For simplicity of presentation, these groups are referred to as "primarily farmworkers", "primarily nonfarm workers", and "primarily not in the labor force". Each approximates roughly one-third of the migrant work force. These groups are mutually exclusive but not exhaustive. Workers citing unemployed, operating a farm, or unpaid family labor as their primary activity were not included in the data. The final analysis was based on 149 cases.

Table 1 about here

Other measures were also available to examine attachment to farmwork, including amount of farm earnings, days of farmwork, and proportion of total earnings received from farmwork. These variables are highly related to each other and all are probably indicators of attachment to farmwork. However, the primary employment status variable was chosen as the more useful indicator because it allows migrant farmworkers to define themselves in terms of attachment and, at the same time, enables a clear, concise categorization of labor force experience. Attachment to farmwork, as defined here, is an objective measure based on greatest amount of time spent in an activity. It does not imply attachment in terms of one's unwillingness or inability to leave this activity for another.

Variables useful for differentiating between groups of hired farmworkers include basic demographic characteristics, such as age, sex education and racial/ethnic background; regional and residential locations; family income and individual earnings; and job-related characteristics, such as major crop activity, distance traveled, method of pay, and amount of farmwork done as a migrant (Martin and Mamer, 1982; Whitener Smith, 1976; Pollack, 1981; Marshall, 1974).

This paper examines the three attachment groups to determine if they differ significantly by demographic and employment characteristics. A one-way analysis of variance was used to see if statistical variation on each individual variable was significantly greater between groups than within groups. Since this bivariate analysis did not take into account intercorrelations among variables, a step-wise discriminant analysis procedure was introduced. This procedure was used to arrive at reduced sets of demographic and employment variables which are different between the three groups of migrants. The coefficients provided give an indication of the relative importance of the

variables in differentiating between groups. This procedure does not necessarily imply a causal relationship, i.e., characteristics do not necessarily cause individuals to develop attachments to farmwork or other activities. Instead, the variables combine to form functions that differentiate and characterize the attachment groups (Tatsuoka, 1971). 1/

FINDINGS

Background Characteristics of Migrants

In 1979, there were 2.7 million persons 14 years of age and over who did farmwork for cash wages or salary at some time during 1979. 2/ About 213,000, or 8 percent of these, were migrant farmworkers--persons who left home overnight to do farmwork in a different county or State with the intention of eventually returing home. Also included in this population are those workers who had no usual place of residence and did hired farmwork in two or more counties during the year. Tables 2 and 3 present mean data on various demographic and employment characteristics of migrant farmworkers.

Tables 2 and 3 about here

These data suggest possible inaccuracies and contradictions in the general image of migrant farmworkers as portrayed in the popular literature and reinforced by the media. For example, migrants clearly do not comprise a large proportion of the total employed or of hired farmworkers. In 1979, they accounted for only 8 percent of the hired farm work force and less than 1 percent of the employed U.S. population (Schaub, 1981). Also, contrary to popular image, the majority were not Hispanics and Blacks. 3/ While there was considerable variation among regions, minorities accounted for only 38 percent of the total migrant work force. Most of these were

Hispanics. Migrants, on the average, tended to be less educated than the general population and had a mean educational level of 10.7 years of school completed in 1979.4/ Despite this, almost half of all migrants had completed high school and close to a third had some college education.

Not all migrants have their home base in Florida, California, and Texas and travel long distances during the harvest season, following "the migrant stream". Almost a third of all migrant farmworkers were living in the Northeast or North Central States, generally in nonfarm residences. On the average, migrants traveled about 480 miles a year one way to reach their farm jobs.5/ This is a considerable distance compared with that of most job commuters. However, these data do not support the idea that migrants travel long distances through many different States to harvest crops. Most traveled no further than the equivalent distance from Miami, Florida to Charleston, South Carolina or Brownsville to El Paso, Texas. Only a small proportion (15 percent) traveled 1,000 miles or more.

Most migrants (64 percent) reported that all of their farmwork during the year required migratory travel, but some held additional farm job(s) during the year that did not necessitate overnight travel. In addition, over half of the migrants did some nonfarm work during the year. An agricultural dependency rate based on the proportion of total earnings from farmwork 6/ indicated a high (but not complete) level of economic dependence on farm earnings. Migrants as a group received 64 percent of their earnings from farmwork. Also, in contrast to the general image, migrants were as likely to be working in field crops (36 percent) as fruits and vegetables (30 percent) on their longest farm job.7/ About 17 percent were paid by the basket, box, or other piece rate. Almost half (45 percent) were paid by the hour and received an average hourly wage rate of $2.98.8/ The Federal minimum wage for farm and nonfarm workers

in 1979 was $2.90. Payment by the hour and the piece are both characteristic of temporary farm jobs.

It is difficult to evaluate the economic status of migrant farmworkers. Clearly their earnings are low compared with other occupations. Migrants averaged about $4,900 in total earnings compared with $14,900 for all wage and salary workers in the United States (U.S. Department of Commerce, 1979. They averaged about $2,300 in annual earnings from farmwork.9/ However, these earnings figures reflect the large number of casual workers, students, and housewives, who intentionally work only a few weeks at farmwork during the summer months. About 60 percent of migrants were persons other than the household head who generally did not have primary responsibility for family support. The predominance of this group of workers is reflected in the relatively high mean family income of $14,000.10/ While this was lower than the $19,600 mean family income for all U.S. families (U.S. Bureau of Census, 1980), most of these migrant families would probably not be classified below the poverty level. Families with incomes of $14,000 would require a family size of 12 to fall below the poverty line.11/ Another indicator of economic status is home ownership. Three out of five migrants owned or were buying their home or lived with a family that did; the remainder was renting or living in a domicile that did not require cash rent.

These findings, however, should not be used to camouflage the severe social and economic problems faced by some migrants. Some migrants are, indeed, less-educated, economically disadvantaged, and highly dependent on migratory farmwork because of limited skills and employment alternatives. Yet, caution should be used not to overgeneralize these cases.

> There is doubtless some truth in many stereotypes, but the commonplace application of them as descriptive of the behavior of all the members of a group is in error. (Simpson and Yinger, 1972:154).

Analysis of Variance by Attachment Groups

Despite the general profile of migrant farmworkers presented above, there is considerable variation in the demographic and employment characteristics of the migrant farm work force. Several statistically significant differences become apparent when characteristics of migrants are compared by the three primary labor force attachment groups using a one-way analysis of variance technique. Age, minority status, region, residence, and household status were significant factors in differentiating among the three groups. For example, in terms of demographic characteristics:

- --Those in the primarily farmwork and nonfarm work categories tended to be older than those not in the labor force most of the year. Mean ages were 35, 31, and 20 years, respectively.
- --Almost two-thirds of the primarily farmwork group were minorities, mostly Hispanics, compared with less than a third for other groups.
- --Workers primarily attached to farmwork and nonfarm work were more likely to be heads of households. Those not in the labor force were largely students working after school and during summer vacations.
- --In the West, migrants were more likely to be in the primarily farmwork group; in the North Central region, migrants were more likely to be in the nonfarm work and not in the labor force groups.
- --While the majority of all groups lived in nonfarm places, the primarily farmwork group was more likely than the nonfarm group to have a farm residence.

With the exception of age and household status, the primarily nonfarm workers and those not in the labor force were quite similar in the demographic characteristics discussed above. Workers not in the labor force, however, differed from the farmwork-attached group on all of these variables except nonfarm residence. Education, sex, residence in the South, family income, and home ownership did not differ by attachment group.

The employment profile of the three attachment groups also varied considerably. The farmwork-attached group was less likely than others to do only migrant farmwork during the year. About 21 percent of this group reported that all of their farmwork was migratory, compared to over 80 percent for the other groups. This suggests that migrant farmwork is a supplemental work experience for the majority of the primarily farmwork group.

Data show that the primarily farmwork group was more likely to work with fruit, vegetable, and tree nut production while the other groups were more likely to be involved with grain, cotton, tobacco and other field crops. Differences for livestock and dairy work were not significant.

As would be expected, the farmwork attached group tended to have higher average farm earnings ($4,648) than other groups since they cited farmwork as their year's major activity. Consistently, the nonfarm work group received higher average nonfarm earnings ($7,283). Thus, the farmwork and not in the labor force groups were most similar in their nonfarm earnings. The marked contrast between total earnings for these groups clearly shows the higher earnings power of the nonfarm group over the farmwork group.

The economic dependency rate illustrates the importance of farmwork as a source of individual earnings for each group. The primarily farmwork group received almost 90 percent of their earnings from farmwork, while the nonfarm group received only 17 percent of total earnings from farmwork. Because the

not in the labor force group were not employed most of the year, their farm earnings accounted for a high proportion (80 percent) of their total employment income.

Group differences for method of pay and distance traveled were not significant.

Multivariate Analysis of Attachment Groups

Data analyzed above suggest that the three attachment groups differ in terms of demographic, employment, and earnings characteristics. However, the above comparison of mean values does not account for inter-correlation among the discriminating variables. For this reason, a step-wise discriminant analysis procedure was used to simultaneously examine the demographic and employment variables (considered separately)[12/]. The results of these two separate discriminant analyses on are presented in table 4.

Table 4 about here

Demographic Discriminant Analysis

From the set of 11 demographic variables in table 2, eight proved to be statistically significant discriminators of the three attachment groups. Family income, and residence in the North Central and Southern regions were removed from the estimated discriminant function.[13/] The discriminant analysis procedure resulted in two significant and orthogonal canonical discriminant functions. The first function (I) is the most important and explains 65 percent of the discriminating power of the two possible functions. An examination of the group centroids for Function I shows a positive centroid (1.02) for the farmwork group and negative centroids for the nonfarm work

(-.49) and not in labor force (-.39) groups. Since the centroids of the latter two groups are quite similar, this suggests that Function I is most useful in differentiating between the farmwork group and others.

The variables for Function I are ranked according to the relative magnitude of the standardized coefficients. These coefficients indicate the relative importance of each variable in much the same way as do beta weights in a regression equation.[14/] The standardized coefficients indicate that the groups differ most on age and minority status and to a lesser extent on residence in the West. Sex and home ownership appear to add little to the function. Since the centroids clearly show the primarily farmwork group as differentiated from the others. The coefficients and their signs can be used to indicate that the farmwork group tended to be older, minority members who were more likely to live in the West compared with the other two attachment groups.

The second function (II) is orthogonal to the first and the centroid values suggest that it is most useful in explaining differences among those not in the labor force and the other two groups. The group mean for those not in the labor force falls toward the negative end with the nonfarm work group at the positive end. The farmwork group mean appeared in the middle although closer to the nonfarm work group. This function shows that minority status, age, nonfarm residence, and home ownership were most important in differentiating between the attachment groups. However, minority status is by far the most important variable suggesting that many of the other characteristics are highly correlated with this attribute. The coefficients show that the not in the labor force group was more likely to be young, White, and living in nonfarm places than the other workers.

Thus, the demographic profile presented by the discriminant analysis is similar to the one obtained from analysis of variance but more complete. The discriminant functions were moderately successful in distinguishing among the three attachment groups as indicated by canonical correlations of .61 and .49 in Functions I and II, respectively, and the ability of the functions to correctly classify 71 percent of the sample cases.15/

Employment Discriminant Analysis

The analysis of variance in table 3 focuses on 12 employment-related variables. The days of farmwork variable was eliminated prior to the discriminant analysis because of its high correlation with farm earnings. Days of nonfarm work and nonfarm earnings were deleted because information was not available for all cases (about 48 percent of the migrants did not do any nonfarm work) and the sample size would have been reduced considerably. Of the nine variables included in the discriminant analysis, all were retained in the functions (table 4). Thus, distance traveled, method of pay, and work with livestock, which were not important in the analysis of variance are judged to be significant discriminating variables in this analysis.

Function I explains over two-thirds of the discriminating power of the two functions. An examination of the group centroids shows the nonfarm work group at the negative end (-2.197) and the farm work and not in the labor force groups at the positive end (.877 and 1.097, respectively). This function, therefore, appears to be most useful in differentiating between the nonfarm work group and others, especially those not in the labor force. The standardized coefficients indicate that the agricultural dependency rate, total earnings, farm earnings, and to a lesser degree method of pay are the most important factors differentiating the groups. The remaining variables

are relatively similar in their distinguishing power. The coefficients show the nonfarm work group as having high total earnings, low farm earnings, and little economic dependence on agricultural earnings compared with other groups. They are also more likely to receive an hourly wage as opposed to other methods of pay.

Function II differentiates between the primarily farmwork group at the positive end and the nonfarm work and not in the labor force groups at the negative end. Working with fruits and vegetables is by far the most important variable, although farm earnings, and dependence on farm earnings are also noteworthy.

In summary, dependence on farm earnings, total earnings, farm earnings, and method of pay were most important in distinguishing between the nonfarm work group and others in the first function. The second function, while explaining only a third of the variance in characteristics, pointed to crop and livestock activity, especially work with fruits and vegetables, as being the most important discriminator. The employment discriminant functions successfully distinguished between the three attachment groups and were probably better discriminators than the demographic functions. Discriminating power is judged by high canonical correlations of .86 and .74 for functions I and II, respectively, and the ability of the function to correctly classify 89 percent of the sample cases.

SUMMARY AND IMPLICATIONS

This paper has examined the variation within the migrant farm w(k force in an attempt to define distinct groups of migrants which vary significantly in their economic and demographic composition. Clearly, the attachment to

farmwork typology is useful for this purpose. The existence of these three groups with their differing characteristics suggests that limited data, speculation, and overgeneralization have led to a misleading image of migrant farmworkers and the type of work they do. The discriminant analysis procedure can be used to construct a profile of each group to show differences and similarities.

The primarily farmwork group is most strongly attached to farmwork, by definition as well as by various employment characteristics. These workers are highly dependent on agriculture for the major part of their earnings and many have no other source of earnings. They work longer at their farmwork and have higher farm earnings than other groups, but because of their dependence on farmwork, their total earnings are lower than those of the primarily nonfarm work group. They are more likely to be older, household heads, and probably are largely responsible for their families' support. They are most frequently minorities, largely Hispanic, living in the West. Many hold farm jobs in addition to their migratory farm work, although it appears that migrant work is used to supplement more regular farm jobs. Only a small proportion stated that migrant farmwork was their only farmwork during the year. However, when this group of workers did migratory work, they were more likely than other groups to travel greater distances.

In contrast, the primarily nonfarm work group had little attachment to farmwork and received only a small portion of their total earnings from farmwork. They worked only a few days at farmwork during the year and because of their greater dependence on nonfarm work, these workers had higher total earnings than other. The nonfarm work group appears to be better of economically than the primarily farmwork group and probably use farmwork only for supplemental income. Almost all of their farmwork is migratory although they tend to

travel less distance than others. It is not clear from this information how many of these workers must piece together several jobs during the year to support themselves and their families. Farmwork may be only one of a series of necessary economic sources. Demographically, these workers are younger than the farmwork group, more likely to be White and live in places outside of the West. Overall, they appear to have little resemblance to the common migrant image.

Finally, those not in the labor force also represent a group with distinct characteristics. While these workers do only a few days of farmwork during the year and receive lower annual farm earnings than the primarily farmwork group, they are similar to this group in their strong agricultural dependence. This is largely because they are out of the labor force most of the year and do not have additional nonfarm earnings. However, their economic status must be considered in light of other factors. Most are young, White, students, living outside of the West; few are household heads and thus are likely to receive economic support from other family members. Many may be simply earning extra spending money during summer vacations. Others, however, may be contributing necessary earnings, even in small amounts, to the family income. Considering that almost half of this group is between 14 and 17 years and generally travel long distances, many of the not in the labor force group may be traveling with the family unit contributing to family support. Some members of the not in the labor force group may closely match the stereotypic migrant image; clearly others do not.

From the standpoint of the agricultural industry, all migrant farmworkers, regardless of their attachment to farmwork, are an important part of the agricultural production process. When local labor is not available during the

short, but often critically timed, harvest period, migrant workers must be brought in from other areas to perform necessary labor. However, migrants are a diverse group of people and the existence of different groups of migrants based on their atttachment to farmwork has important implications for farm labor policy and programs. The attachment typology has shown that the three groups of migrants differ significantly in their demographic background, employment experiences, and socioeconomic needs. This suggests that farm labor policies and programs designed to improve the operation of the farm labor market may have different impacts on different groups of migrants.

One important policy issue which has received considerable attention during the last few years focuses on increased employment and wage stability for hired farmworkers, including migrants. This approach, termed decasualization or stabilization of farmwork, encourages farm operators to plan and schedule the work activities of their agricultural workers in ways that maximize the workers' employment over longer periods. Proponents of this idea suggest that a more permanent and productive work force can be developed and utilized by increasing wages, providing benefits and worker incentives, lengthening the harvesting period for certain crops, diversifying farm production, and creating structured farm and nonfarm job opportunities. Under this system, fewer workers would have to migrate to do farmwork because they could remain in one location and achieve the equivalent of year-round employment. However, the economic tradeoffs must be considered since decasualization of workers also tends to reduce the number of seasonal jobs for some workers while stablizing the employment and earnings of others. Some limited success in decasualizing workers has already been seen in Florida citrus (Glover, 1980) and in California lettuce (Friedland, et al., 1978) and lemons (Mamer and Rosedale, 1980).

The decasualization of farmwork would have different effects for the three attachment groups discussed in this paper. Increased efforts to decasualize migrant labor would probably impact most heavily on the primarily farmwork group. These workers already indicate a strong attachment to farmwork, either by choice or necessity, and would probably be interested in obtaining more stable, higher paying farm employment. The majority live in the West and work in fruits and vegetables, an area and type of crop conducive to an extended growing season. Agricultural employers interested in improving productivity and quality performance would probably direct their decasualization efforts toward those workers who are most experienced, attached to farmwork, and located in areas conducive to year-round employment opportunities. Since the primarily farmwork group is probably the most economically disadvantaged category in terms of wages and home ownership, decasualization has the potential to improve the economic status and lifestyle of these workers through increased wages, stabilized employment, and worker benefits and perquisites.

In contrast, it seems likely from data reported here that the primarily nonfarm work group would not benefit as much from a large scale decasualization effort. It is doubtful that many of these workers would be willing to sacrifice their higher paying nonfarm jobs for full-time agricultural work. In fact, for those workers that are economically dependent on both farm and nonfarm earnings for a minimum standard of living, decasualization could have a negative affect in terms of decreased farm job opportunities.

Decasualization efforts would have few beneficial effects on those primarily not in the labor force since most of these workers are still in school. This group would probably experience much of the declining farm work opportunities which result from the large-scale decasualization of farmwork.

However, a successful stabilization of the primarily farmwork group could spill over onto those who are not in the labor force most of the year but who travel with migrant parents. Improved employment and wage stability could result in a better economic life for both parents and their children.

Clearly, additional information is needed on these three attachment groups, particularly the primarily nonfarm work and not in the labor force groups, to determine their emloyment motivations, job aspirations, economic needs, and degree of dependence on farm earnings for individual and family support. More detailed research using a contextual approach, examining the individual within the family, would be most useful in answering these questions.

FOOTNOTES

1. This analysis is based on a procedure developed in Nie et al. (1975) and elaborated by Klecka (1981).

2. This sample does not include persons performing hired farmwork during the year but who died, entered the Armed Forces, or were no longer in the civilian noninstutional population for other reasons. Also foreign nationals who did hired farmwork in this country and returned to their homes before the field collection were not included. While there are no estimates on the numbers of undocumented foreign workers in the sample, this group generally avoids contact with Government officials and most are probably not counted in this population. For purposes of this survey, farmwork is defined as the production, harvesting, and delivery of agricultural commodities, as well as management of a farm if done for cash wages. Exchange work, work done by family members without pay, custom work, or work done exclusively for pay in kind were not included. This data source is currently the only national level household survey of hired and migrant farmworkers.

3. Racial/ethnic groups are classified into three mutually exclusive groups based on a self-identification question concerning national origin. The groups are White, Hispanic, and Black and Other. For purpose of later analyses, this variable is coded into minorities = 1 and Whites = 0.

4. Educational data are generally presented for populations of 25 years and over to allow the opportunity to complete school. This was not done here to avoid reductions in the sample size. This, in effect, increases the mean education for each group although patterns of differences were similar. In 1979, the mean educational level for migrants 25 years and over was 10.1 years; about 53 percent had high school degrees. In comparison, 68 percent of the total population aged 25 and over had completed high school (U.S. Bureau of Census, 1980).

5. Distance traveled is based on responses to a question concerning the longest distance away from home that a worker traveled while doing migrant farmwork. It does not include distance traveled to return home. This variable suffers from imprecise measurement because the data necessitated estimating distance as the midpoint of a range indicated by the respondent. Midpoints were taken at 50, 163, 300, 450, 750, 1250, 1750, and 3000. Because distance traveled was judged to be an important discriminating variable, this measure was used in the absence of a satisfactory alternative.

6. Agricultural dependence = total farm and nonfarm earnings/farm earnings. Scores range from 0 to 100 percent. A score of 51 is interpreted as 51 percent of total earnings was derived from farm work.

7. Major crop and livestock activity was determined from a question concerning the crops or livestock which the respondent worked with most on the farm where he/she worked the greatest number of days in 1979. This activity may or may not reflect the nature of migratory work. However, the majority of migrant workers suggested that migrant farmwork was their only farmwork during the year. Response categories were coded into (1) field crops, including grains, cotton, tobacco, and other field crops; (2) fruits and vegetables, including vegetables and melons, fruit, or tree nut; (3) livestock, including beef cattle, dairy, poultry and eggs, and other livestock; (4) other, including nursery or tree crops and other.

8. Method of pay was determined from a question concerning type of payment schedule for the work done on the farm where the respondent worked the greatest number of days in 1979. This pay method may or may not relate to the worker's migratory farmwork. For purpose of this analysis, data were coded as by the hour=1, other=0.

9. All dollar earnings reported exclude the value of perquisities or fringe benefits furnished by the employer. In 1979, 40 percent of all migrants received noncash benefits, including housing, transportation, or meals, in addition to their farm wages.

10. Family income includes wages and salaries, net income from business or farm, pensions, dividends, interest, rent, and any other money income received by members of the family during the previous 12 months. This measure suffers from imprecise measurement since the data were estimated as the midpoint of a range of income indicated by the respondent. Midpoints were taken as dollar amounts of 500, 1500, 2500, 3500, 4500, 5500, 6750, 8750, 11000, 13500, 17500, 22500, 37500, and 62500. The reader should use caution in interpreting these mean data.

11. Data on size of family were not available for this study, but similar data collected in 1975 suggest that migrant families have an average of 3.7 members per family (Whitener Smith and Rowe, 1978). Further analysis on these data suggested that only about 27 percent of migrant families in 1979 were classified as "economically disadvantaged" based on an approximation to the official poverty criteria (Whitener Smith, 1978).

12. A discriminant analysis for all variables taken together was conducted with the result that agricultural dependency, total earnings, and farm earnings were the best differentiators of the three groups. However, the purpose of this study is to obtain a profile of different attachment groups, not to construct an explanatory model. If one wished to consider economic and demographic variables simultaneously, other types of causal analysis would be appropriate. This is beyond the scope of this paper. See Warland et al. (1974).

13. Variables were deemed significant and entered into (or retained) in the discriminant function if its F values, taking account of other variabes in the function, indicated a 1 percent level of significance. Results of the discriminant analyses are affected by the intercorrelations between variables included in the functions. However, correlations among variables did not exceed .60 and most were under .50.

14. Caution should be used in drawing conclusions with respect to the relative importance of individual variables since this is a function of the variables included in the analysis.

15. Of course, the ability of this discriminant function to correctly classify cases of a sample different from that in which the function has been derived probably would be lower.

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Table 1--Primary Employment Status of Migrant Farmworkers, 1979 1/

	Thousands	Percent
Total	217	100
Farmwork	69	32
Hired	63 *	29
Operating a farm on unpaid family labor	6	3
Nonfarm Work	65 *	30
Unemployed	2	1
Not in Labor Force	81 *	37
Keeping House	6	3
Attending School	68	31
Other	7	3

1/ Based on original weighting procedures to expand numbers to national estimates.

Table 2--Demographic Profile of Migrant Farmworkers by Attachment to Farmwork

Variables	Mean Values				F-Ratio
	Total Migrants	Primarily farm workers	Primarily nonfarm workers	Primarily not in labor force	
Age	27.89	34.92	31.02	19.94	22.81**
Education	10.69	9.89	11.81	10.42	2.99
Minority Status (minority=1)	.38	.63	.22	.32	10.11**
Household Status (head=1)	.37	.58	.51	.12	16.47**
Sex (male=1)	.76	.86	.78	.69	2.00
Region:					
North Central	.24	.10	.32	.30	3.78*
South	.40	.35	.41	.42	.29
West	.30	.52	.22	.19	8.34**
Residence (nonfarm=1)	.96	.90	1.00	.97	3.09*
Home ownership (own/or buying=1)	.58	.58	.48	.66	1.85
Family income	14,022	11,797	13,673	16,020	2.07
N	149	45	46	58	

See text for definition of variables.
** indicates significance at 1 percent level.
* indicates significance at 5 percent level.

Table 3--Employment Profile of Migrant Farmworkers by Attachment Group

Variables	Mean Values				F-Ratio
	Total Migrants	Primarily farm workers	Primarily nonfarm workers	Primarily not in labor force	
Total earnings	4,860	5,082	8,554	1,733	43.71**
Farm earnings	2,271	4,649	1,272	1,230	34.47**
Nonfarm earnings 1/	4,816	1,673	7,283	1,311	30.17**
Dependency rate	64	90	17	80	21.90**
Days of farmwork	90	105	60	48	39.36**
Days of nonfarm work 1/	149	55	208	74	39.21**
Distance Traveled (miles)	477	519	389	514	.697
Method of pay (by hour=1)	.45	.53	.34	.49	1.96
Crop Activity:					
Field	.36	.04	.49	.52	17.89**
Fruits and vegetables	.30	.63	.25	.10	22.29**
Livestock	.18	.18	.16	.20	.140
All farmwork done as migrant	.64	.21	.86	.81	40.27**
N	149	45	46	58	

See text for definition of variables.
** indicates significance at 1 percent level.

1/ Based on 80 cases where individuals did both farm and nonfarm work during the year. Those who did only farmwork were not included in the base.

Table 4--Discriminant Analysis of Three Groups of Migrant Farmworkers Defined by Attachment to Farmwork

Variable 1/	Standardized Coefficients		Means (Centroids)			Significance Test of Functions		
	I	II		I	II		I	II
Demographic Characteristcs			Primarily:					
Age	.626	-.539	Hired Farmworkers	1.02	.36	Percent explained 1/	.65	.35
Minority Status (Minority = 1)	.481	.737	Nonfarm Workers	-.49	.65	Canonical Correlation	.61	.49
Residence in West (Yes = 1)	.397	.353	Not in Labor Force	-.39	-.80	Wilk's Lambda	.48	.76
Education	.322	-.245				X^2 for Lambda	103	38
Residence (nonfarm = 1)	-.261	-.486				d.f.	16	7
Household status (head=1)	.247	-.294				Probability Level	P>.00001	P>.00001
Sex (male = 1)	.184	.389						
Home ownership (own or buying = 1)	-.148	.429						
Employment Characteristics			Primarily:					
Dependence on farm earnings	.638	-.443	Hired Farmwork	.877	1.887	Percent explained 1/	.67	.33
Total earnings	-.563	.284	Nonfarm Work	-2.197	-.668	Canonical Correlation	.85	.74
Farm earnings	.490	.555	Not in Labor Force	1.079	-1.08	Wilk's Lambda	.13	.45
Method of pay (by hour=1)	.356	.161				X^2 for Lambda	293	114
Distance traveled	-.279	-.159				d.f.	18	8
Worked with field crops (Yes = 1)	.237	-.003				Probability Level	P>.01	P>.00001
Worked with livestock (Yes = 1)	.205	.084						
All farmwork done as migrant (Yes = 1)	-.190	-.393						
Worked with fruits and vegetables (Yes = 1)	.146	.771						

1/ See text for definition of variables.
2/ Percent of variance explained by functions